

IN THE CLAIMS

1-18 (Canceled)

19. (Previously Presented) An apparatus including:

- (a) a release chamber adapted to contain a liquid reactant metal up to a liquid reactant metal level;
- (b) a submerging arrangement for moving a container to a release position within the release chamber and below the liquid reactant metal level;
- (c) a collection area having an upper boundary defined by an upper surface of the release chamber, the upper surface of the release chamber being spaced apart from a bottom surface of the release chamber along a vertical axis; and
- (d) a flow inducing arrangement for inducing a flow of a first liquid reactant metal through the release chamber in a direction transverse to the vertical axis.

20. (Previously Presented) The apparatus of claim 19 further including a liquid reactant containment vessel having a liquid reactant metal flow path to the release chamber and wherein the flow inducing arrangement is located within the liquid reactant metal containment vessel.

21. (Previously Presented) The apparatus of claim 20 wherein the flow inducing arrangement is located proximate to the release chamber.

22. (Previously Presented) The apparatus of claim 19 wherein the submerging arrangement includes a submerging structure adapted to be driven between a retracted position above

1 the liquid reactant metal level in the release chamber and an extended position in which a  
2 distal portion of the submerging structure extends below the liquid reactant metal level.

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4 23. (Previously Presented) The apparatus of claim 22 further including a feed area located  
5 adjacent to the release chamber.

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7 24. (Previously Presented) The apparatus of claim 23 wherein a path of the submerging  
8 structure from the retracted position to the extended position passes through the feed area.

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10 25. (Previously Presented) The apparatus of claim 24 wherein the flow inducing arrangement  
11 is located adjacent to the feed area.

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13 26. (Previously Presented) The apparatus of claim 19 further including a liquid reactant metal  
14 treatment system that includes a reaction chamber adjacent to the release chamber in  
15 position to receive the first liquid reactant metal flowing through the release chamber.

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17 27. (Currently Amended) The apparatus of claim 19 further including a conduit connected  
18 between the collection [chamber] area and a liquid reactant metal treatment system.

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20 28. (Previously Presented) An apparatus including:

21 (a) a release chamber adapted to contain a liquid reactant metal up to a liquid reactant  
22 metal level therein;

23 (b) a dunker member adapted to be driven along an incline between a retracted

1 position above the liquid reactant metal level and an extended position in which a  
2 distal portion of the dunker member extends to a release location within the  
3 release chamber and adjacent to an inlet opening of the release chamber; and  
4 (c) a collection area with an upper boundary defined by an upper surface of the  
5 release chamber.

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7 29. (Previously Presented) The apparatus of claim 28 wherein the liquid reactant metal level  
8 is above the upper boundary of the collection area.

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10 30. (Previously Presented) The apparatus of claim 28 further including a feed area that is  
11 adjacent to the release chamber.

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13 31. (Previously Presented) The apparatus of claim 30 wherein a path of the dunker member  
14 from the retracted position to the extended position passes through the feed area.

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16 32. (Previously Presented) The apparatus of claim 28 further including a flow inducing  
17 arrangement for inducing the flow of a first liquid reactant metal through the release  
18 chamber from the inlet opening of the release chamber to an outlet opening of the release  
19 chamber.

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21 33. (Previously Presented) The apparatus of claim 32 further including a reaction chamber  
22 adjacent to the release chamber in position to receive the first liquid reactant metal  
23 flowing through the outlet opening of the release chamber.

1 34. (Previously Presented) A method including:

- 2 (a) moving a container of feed material to a release location below an upper surface  
3 of a liquid reactant metal;  
4 (b) releasing feed material from the container while the container is held at the release  
5 location;  
6 (c) collecting a released fluid in a release chamber, the released fluid made up of fluid  
7 generated from the released feed material; and  
8 (d) contacting the released fluid with the liquid reactant metal.

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10 35. (Previously Presented) The method of claim 34 further including inducing a flow of  
11 liquid reactant metal through the release chamber from an inlet end of the release  
12 chamber to an outlet end of the release chamber.

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14 36. (Previously Presented) The method of claim 34 further including the step of contacting  
15 the released fluid with a second liquid reactant metal.

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17 37. (Previously Presented) The method of claim 34 further including carrying at least a  
18 portion of the released fluid into a reaction chamber in a flow of the liquid reactant metal.

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20 38. (Previously Presented) The method of claim 34 further including the step of removing at  
21 least a portion of the released fluid from the release chamber and injecting the removed  
22 portion into the liquid reactant metal.